

GOAL 10

Protect and manage natural resources within the planning area in order to ensure continued viability and biodiversity of plant and animal life and to maintain compliance with the anticipated Incidental Take Permit (ITP).

Current Conditions Summary

Environmental protection within the planning area has primarily been implemented to date using the following mechanisms: existing environmental design criteria in the land development regulations, discouragement of development of environmentally sensitive areas through the ROGO point system and acquisition of habitat. The HCP and Master Plan strategies will primarily change the second mechanism with the addition of the Tier Map Overlay. With this new system comes an accelerated acquisition program. Monroe County has anticipated this trend county-wide and must contemplate being in the position of holding more and more land, either temporarily until it can be resold, or permanently. With this increased land ownership comes the need for constant attention to land management issues. In 2001 Monroe County hired a full-time land steward to address management issues on county lands. Prior to that, there was no dedicated land management framework within county government.

Due to its environmental sensitivity and biodiversity the planning area has received the attention of numerous conservation land management entities. Those operating within the planning area at present include the U.S. Fish and Wildlife Service (FWS, Florida Keys Refuges), Monroe County and two private non-profit organizations, The Nature Conservancy (TNC) and the Florida Keys Environmental Restoration Trust Fund (FKERTF, National Audubon of Florida, Trustee). Of the latter two, TNC is a land owner in the area. The FKERTF performs habitat restoration and management activities on publicly owned lands in the area. The State of Florida is a major land owner in the area but through a cooperative agreement, turns management of lands they acquire over to the FWS.

All of these entities, with the exception of Monroe County have been engaging in natural resource land management activities within the planning area for many years and all have focused on management of undisturbed habitat or habitat that can be restored. Traditional habitat management within the planning area usually includes the following activities: land protection (i.e., from dumping, roaming domestic animals, poaching, etc.), eradication of invasive exotic vegetation, habitat restoration through removal of disturbed areas, and controlled burning of pinelands. These activities are best suited to unpopulated or sparsely populated areas. Until recently most agencies have generally avoided the acquisition of platted, improved subdivision lots, whether they contained natural habitat or not.

The application of management activities to subdivision lots brings a suite of additional tasks, the most important of which is coordination with neighboring land owners. The amount of work needed to manage small fragmented subdivision parcels has made the cost-benefit ratio seem less attractive in the scheme of a management program that covers thousands of acres. After all, the primary purpose for acquisition of many of these lots has been to prevent additional development impacts on wildlife and biodiversity within the planning area. Once a lot is acquired however, the land-owner is responsible for its management compatible with resource conservation goals and with the surrounding neighborhood. Over the last few years, the FWS has begun to shoulder responsibility for management of many of these lots within priority areas. The FWS through a cooperative agreement with Monroe County manages many county-owned subdivision lots.

The population viability analysis of the Key deer demonstrates that the remaining hammocks and pinelands within the planning area have very high habitat value for the deer. Development of these habitats is currently discouraged mainly through the Rate of Growth Ordinance (ROGO) point system. Because the Tier System Overlay Map is based upon the H of parcels, hammocks and pinelands have already been mapped as Tier I "Natural Lands."

The submitted HCP greatly limits the clearing of native habitat. Limited clearing is only permitted on parcels to be developed for residential purposes or for local road widening. The total cumulative amount of clearing permitted over the 20-year period of the HCP is no more than .2 percent of the current extent of native habitat (a total of 7.1 acres) and no more than 20% of any individual lot with native habitat for wildfire prevention purposes only.

Analysis of Community Needs

Habitat Management Implementation

There is a need to plan for organized habitat management of lands acquired for conservation purposes that will meet the requirements of the HCP. The county has not traditionally engaged in natural lands management in the past and has only recently dedicated one employee position to this activity. Therefore, efficient habitat management will likely be accomplished through heavy coordination with existing management entities operating within the planning area. There is a need to anticipate future management needs based upon habitat acquisition goals and to determine how the county will handle expanding management responsibilities. There is a further need to organize completed annual management activities into report form to fulfill HCP mandates.

HCP Compliance Reporting

There is a need to coordinate all of the activities contained in the HCP and produce an annual report of their status. These activities include the compilation of H units permitted and purchased as described in the Land Use and Redevelopment Element, and the minimization and mitigation measures described throughout the HCP. Many of these measures involve habitat management activities.

Protection of Hammocks and Pinelands

All remaining hammocks and pinelands are included in Tier I on the Tier System Overlay Map. Further protection is needed for parcels that may be developed. The HCP limits further clearing of hammocks and pinelands to no more than 20% and the preferred land use scenario modeled in the PVA included very little new clearing of pinelands and hammocks. Therefore, all of these habitats within the planning area should be classified as automatic high quality due to their high wildlife habitat value.

Comprehensive Plan Consistency

Policies in the comprehensive plan specifically aimed at protection of unique habitat and wildlife communities on Big Pine need to be updated.

Recommended Strategies and Actions**Strategy 10.1**

Revise policies in the comprehensive plan specifically aimed at protection of unique habitat and wildlife communities in the planning area.

Action Item 10.1.1: Delete policies 207.7.5, 207.7.7, 207.7.9, 207.7.10, 207.7.11, and 207.7.17 from the Conservation and Coastal Element of the Comprehensive Plan. These policies cover habitat and wildlife protection issues that either have been fulfilled since the policies were written, or are addressed as part of the HCP as implemented in this Master Plan.

Action Item 10.1.2: Amend existing habitat analysis policies and regulations to add all hammocks and pinelands located within the planning area (on Big Pine Key and No Name Key) to the "Automatic High Quality" category with corresponding open space ratios applied.

Action Item 10.1.3: Limit any clearing of native habitat on parcels to be developed for residential purposes or for local road widening. The total amount of clearing permitted over the 20-year period is no more than .2 percent of the current extent of native habitat (7.1 acres) and no more than 20% of any individual lot with native habitat (for wildfire prevention purposes only).

Strategy 10.2

Formulate and carry out a plan for habitat management of lands acquired for conservation purposes to meet the goals of this Master Plan and the HCP.

Action Item 10.2.1: Offer any lands acquired for conservation purposes to the FWS for management under the refuge system. Terms of offer, ownership and management arrangements are to be worked out on an individual parcel basis and will not be limited by this plan.

Action Item 10.2.2: Work with land managers of the FWS, state and non-governmental organizations to formulate a coordinated land management system for the planning area.

Action Item 10.2.3: Identify and prioritize conservation lands under county ownership and management for implementation of management activities. Anticipate future management needs based upon the projected acquisition of properties required to implement the HCP and this Master Plan.

Action Item 10.2.4: Based on interagency goals formulated pursuant to Goal 4, Strategy 4.2, Action Item 4.2.2, formulate management objectives for specific habitats and locations within the planning area on conservation land under county ownership and management.

Action Item 10.2.5: Identify and prioritize management activities such as fence removal, trash removal, invasive exotic vegetation control, invasive exotic animal control, control of free-roaming domestic pets, controlled burning and habitat restoration.

Action Item 10.2.6: Monroe County shall restore, where practicable, disrupted wetland and native upland vegetation systems on County-owned public lands on Big Pine Key and No Name Key in order to improve Key deer habitat.

Action Item 10.2.7: Use a GIS database for continual tracking and update of management activities and for HCP reporting of management activities. Coordinate this as appropriate with the existing GIS management database used by FWS.

Action Item 10.2.8: The status of management activities shall be organized into report form annually to fulfill HCP mandates.

Strategy 10.3

Coordinate all of the required activities contained in the HCP and produce an annual report of their status. Present the report annually to the Board of County Commissioners, ITP applicants and the public prior to submission to the FWS.

Action Item 10.3.1: Combine tracking of H permitted and H acquired as outlined in the Land Use and Redevelopment Element using a GIS-based system. Compile tracking results for presentation in the annual report.

Action Item 10.3.2: Track and compile annually all management activities and other minimization and mitigation activities carried out in fulfillment of the HCP and present this information in the annual report.

Action Item 10.3.3: Conduct annual formal coordination with the other ITP applicants and other management entities working within the planning area to coordinate management activities and exchange information. In the annual report, provide a summary of relevant management efforts being conducted by others such as monitoring of the Key deer population by the FWS refuge office.

Fiscal Implications and Anticipated Capital Improvement Projects

The HCP anticipates acquisition of approximately 300 acres of Tier I lands over the twenty-year planning horizon to satisfy mitigation requirements. The HCP further estimates the management costs of Tier I lands acquired for mitigation to average approximately \$1,000 per acre per year for the first two or three years of management, after which time costs should decrease to approximately \$100/acre/year. Management of mitigation lands is therefore projected to cost approximately \$1.27 million over the twenty-year horizon. Further analysis of the cost is needed to confirm the per unit cost of management for land in all Tiers and to add the projected acquisition that will be needed to implement the Master Plan requirements over and above the HCP requirements.

GOAL 11

Protect the quality and quantity of water in the freshwater lens systems on Big Pine Key and No Name Key so as to preserve ecosystems dependant upon fresh water.

Current Conditions Summary

The entire habitat, wildlife assemblage and the unique character of the historic and current human community in the planning area are all based on the presence of the freshwater lenses on Big Pine Key and No Name Key. The lenses exist as two major underground basins of fresh water with ground surface expression in the form of freshwater sloughs through the center of the island and numerous freshwater solution holes and ponds scattered throughout the area. Much of the freshwater slough habitat was acquired during the 1990s as part of the South Florida Water Management District's (SFWMD) Save Our Rivers (SOR) project in which the special hydrology of the area was recognized. Ownership of all lands acquired during the SOR project have since been transferred from the SFWMD to the Florida Department of Environmental Protection (FDEP) to be added to the CARL project.

The county conducted a working group planning study of the lens pursuant to Comprehensive Plan requirements. Mainly as a result of that study several consumptive wells were phased out on Big Pine Key with the provision of potable water by the Florida Keys Aqueduct Authority (FKAA). Also, a monitoring system was set in place as a cooperative effort of the SFWMD and the FWS.

Analysis of Community Needs

Continue to Monitor the Lens.

The SFWMD has installed monitoring wells throughout Big Pine Key for use by the FWS in monitoring the water quality and the surface and depth extent of the freshwater lens. A GIS map of the lens would be very useful for land use planning and design purposes.

Consumptive Well Prohibition and Phase-Out.

The phase-out of consumptive wells on Big Pine Key is to be a continuing management activity to be credited towards minimization of impacts on wildlife, especially the Key deer, under the HCP. Policies in the comprehensive plan specifically aimed at protection of the freshwater lens on Big Pine Key need to be reemphasized in this Master Plan.

Extractive Mining Regulations.

The Year 2010 Comprehensive plan restricts extractive mining operations to the conditions set forth on individual permits. No new operations or expansion of existing operations is permitted. All extractive operations are required to submit the following documentation to ensure the protection of ground water resources: a storm water management plan, soil erosion and sedimenta-

tion control plan, a reclamation plan, and survey information documenting excavation depth. Existing resource extraction operations are not permitted to go below sixty (60) feet in depth, effectively limiting the scope of existing operations.

Recommended Strategies and Actions

Strategy 11.1

Continue to regulate development activities that may impact freshwater lens systems.

Action Item 11.1.1: Prohibit new consumptive wells within the planning area.

Action Item 11.1.2: Identify and phase out existing consumptive-use wells and replace them with potable water supplies and cisterns.

Action Item 11.1.3: Consider adoption of design standards such as minimization of impervious surfaces that promote the protection and recharge of the freshwater lens system. This is especially applicable to the major southern lens underlying the U.S. 1 Corridor Area and the Community Center Overlay.

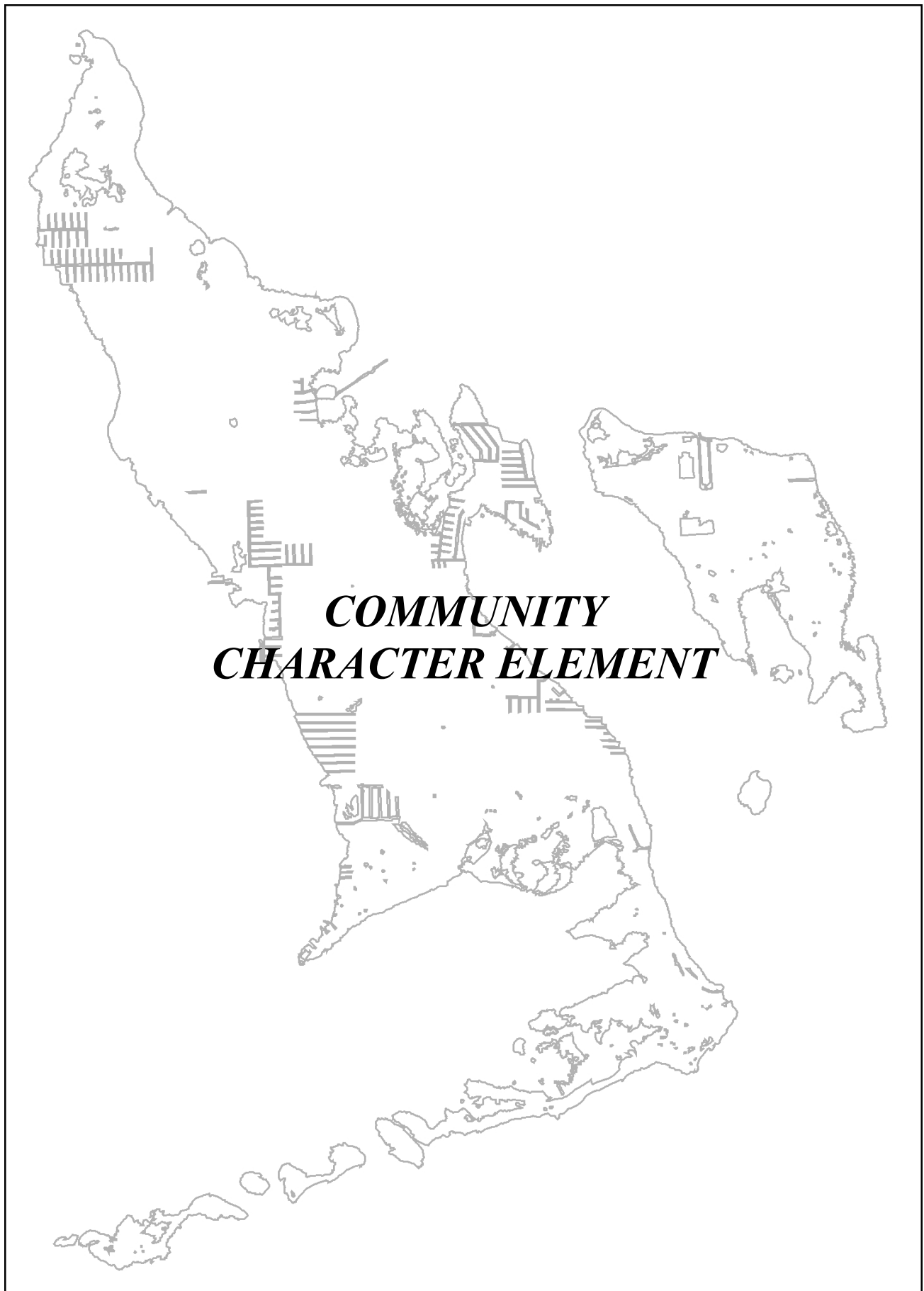
Action Item 11.1.4: Prohibit new resource extraction activities and expansions of existing operations within the planning area. Continue to monitor existing operations upon review of their required annual operating permits.

Strategy 11.2

Implement management activities that enhance and restore the lens.

Action Item 11.2.1: Encourage the U.S. Fish and Wildlife Service to map the extent of the freshwater lens on the GIS database. Utilize this mapped overlay to coordinate land management and restoration activities conducted within the planning area.

Action Item 11.2.2: Incorporate protection of the existing freshwater lens and lens-based freshwater wetlands into land management plans. Coordinate with state, federal and non-governmental land managers within the planning area to encourage them to enhance and restore the freshwater lens and freshwater wetlands through lens monitoring, restoration of freshwater slough hydrology, reduction of salt water intrusion, and improvement of freshwater habitat.



GOAL 12

Define, maintain and enhance the community character of Big Pine Key and No Name Key.

Current Conditions Summary

Community character was a major point of discussion and planning focus during the LCP process. Defining the community character meant many things to LCP workshop participants including recognition of the unique natural character of the planning area, maintaining the area's rural feel and moderate pace, and enhancement of community gathering areas for conducting business, socializing and recreation. In January 2003 Monroe County proceeded with a design charrette planning process for the commercial corridor area of Big Pine Key. The charrette was a facilitated community discussion during which design concepts were developed and graphically assembled at the meeting for immediate reaction. The focus of the discussion was the U.S. 1 Corridor Area and the idea of a village center was presented as a layered concept based primarily on walking distance to the existing commercial center of Big Pine Key. The Corridor Enhancement Plan final draft was transmitted to the Planning Department and certain elements will be adopted as a part of this Master Plan.

Two major planning efforts will be conducted for corridor improvements over the next three to five years. The first is the three-laning of U.S. 1, which is expected to proceed once the incidental take permit is issued. The Florida Department of Transportation (FDOT) will plan and fund that project. The second major effort is the design and development of the Florida Keys Heritage Trail project being conducted by the Florida Department of Environmental Protection (FDEP). This project currently has major funding in place.

Analysis of Community Needs

U.S. 1 and Major Street Beautification

The idea of the Main Street element introduced and evaluated during the LCP process drew some support in the community with ideas for beautification of U.S. 1 and the commercial center of the island. Circulation and ease of accessibility for the human population was integrated into the beautification element during the corridor enhancement charrette process. This should be explored further and coordinated with other agencies working in the corridor, especially in light of pending major U.S. 1 modifications such as three-laning and the addition of the heritage trail.

Commercial Building Design Guidelines

There may be a need for design guidelines for new and replacement buildings. Recommendations for design guidelines are included in the Corridor Enhancement Plan. Care should also be taken to ensure that design requirements do not stifle a positive redevelopment momentum.

The Corridor Enhancement Plan and Community Center Overlay

The county has completed a Corridor Enhancement Plan for the U.S. 1 Corridor Area. Designation of a Community Center Overlay District pursuant to Policy 105.2.15 should also be considered. These efforts should address some of the aspects of the Main Street Alternative considered during the LCP process and further refined during the corridor enhancement charrette process. These include focus on the main business center of Big Pine, improved pedestrian and bicycle circulation, improved vehicular traffic circulation, beautification, strategic integration of existing green space, and introduction of employee housing. The U.S. 1 Corridor Area and the Community Center Overlay will also designate boundaries for the purpose of encouraging concentration of new commercial floor area over the twenty-year horizon.



Figure 4.1 Conceptual U.S. 1 Corridor Area Map and Community Center. The map is a sample concept for a designation of areas based on walking distance.

Recommended Strategies and Actions

Strategy 12.1

Define the boundaries and planning priorities for the U.S. 1 Corridor Area and the Community Center Overlay.

Action Item 12.1.1: Designate the U.S. 1 Corridor Area as the area defined in the Big Pine/U.S. 1 Corridor enhancement plan, incorporated herein by reference. It is a focus of community activity due to the dominant land use pattern of commercial and other non-residential uses. A program of planning focus on this area shall be continued and accelerated.

Action Item 12.1.2: Designate a Community Center Overlay on Big Pine Key pursuant to Policy 105.2.15 where Tier III lots receive incentives for redevelopment. The Community Center Overlay will cover the area described as the Village Center as defined in the Big Pine Key/U.S. 1 Corridor Enhancement Plan.

Action Item 12.1.3: Prohibit the designation of new commercial land use districts beyond that contained in this Master Plan in order to protect the existing viability of the U.S. 1 Corridor Area and Community Center Overlay and to prevent the perpetuation of sprawl or strip commercial zoning.

Action Item 12.1.4: Provide for a community meeting facility either in conjunction with library facilities or as a stand-alone facility. The Community Center Overlay is the preferred location for a community meeting facility.

Action Item 12.1.5: Continue to discourage tour busses within the planning area.

Strategy 12.2

Develop a Corridor Enhancement Plan for the U.S. 1 Corridor Area.

Action Item 12.2.1: Generate a Corridor Enhancement Plan, based upon the corridor enhancement charrette process, that includes ideas for improvement of traffic and pedestrian/bicycle movement, beautification, and incorporation of parks/open space.

Action Item 12.2.2: Develop design guidelines to be adopted as a part of the Land Development Regulations which shall be applied to all new development or substantial redevelopment within the U.S. 1 Corridor Area and the Community Center Overlay based on recommendations of the Corridor Enhancement Plan.

Action Item 12.2.3: Explore the possibility of a limited access one-way local traffic enhancement from Ship's Way to Key Deer Boulevard as part of the Corridor Enhancement Plan.

Action Item 12.2.4: Prohibit new formula retail businesses and restaurants in the planning area through the development of Land Development Regulations.

Action Item 12.2.5: Coordinate with land owners, including the U.S. Fish and Wildlife Service, to explore opportunities for restoration and incorporation of remaining native habitat into the corridor design including purchases, removal of fences, removal of exotics, open space design, historical features and educational materials.

Action Item 12.2.6: Prohibit new industrial uses on U.S. 1 within the planning area in order to enhance the community character of the U.S. 1 Corridor Area.

GOAL 13

Identify, protect and enhance historic resources on Big Pine and No Name Keys.

Current Conditions Summary

The Comprehensive Plan contains standards for designation of historic structures and districts within the county (Objective 104). The planning area contains several archeological sites and older structures that may be of local historic importance. Only one structure has been designated pursuant to the county process to date. That structure is on the eastern shoreline of Big Pine Key at the site of a former shark fishery and processing plant. There may be other structures and sites suitable for designation. The county is currently conducting an inventory of historical sites county-wide.

Analysis of Community Needs

Historic Resources Identification and Protection.

The comprehensive plan contains policies regarding designation and protection of historic resources. There is a need to specifically address resources within the planning area. Many are archeological resources while a few buildings of historic value also remain. Standards are needed to protect and encourage the preservation and enhancement of these resources.

Recommended Strategies and Actions

Strategy 13.1

Provide for retention of remaining historic resources within the planning area through the Comprehensive Plan process for historical designations (Objective 104).

Action Item 13.1.1: Receive and review the results of the Historic Architectural Survey of Unincorporated Areas of Monroe County completed in 2003 in order to identify historic and archeological resources within the planning area.

Action Item 13.1.2: Continue to encourage the protection of the existing historic designated resources.

Action Item 13.1.3: Consider new designation categories based on the results of the Historic Architectural Survey of Unincorporated Areas of Monroe County completed in 2003.

Strategy 13.2

Provide for protection of existing and newly discovered historic resources in accordance with Comprehensive Plan Objective 104 and related policies.

Fiscal Implications and Anticipated Capital Improvement Projects

The fiscal implications of the Community Character Element depend mainly on the final design and implementation strategies of the Corridor Enhancement Plan. The extent of new capital improvements projects, if any, associated with that effort are unknown. However, two new capital projects being conducted by others in the corridor include the three-laning of U.S. 1 by FDOT and the Florida Keys Heritage Trail project led by FDEP. Coordination with these agencies may provide an opportunity for the county to have a good portion of the Corridor Enhancement Plan funded through these two projects.